

NASA-FAA-NOAA Partnering Strategy

**Weather Accident Prevention
Project Review
June 7, 2001**

Dr. Ron Colantonio, Inter-Agency Coordination Manager

Glenn Research Center

Aeronautics

at Lewis Field



Content

Pros for Inter-Agency Collaborations

Pitfalls in Inter-Agency Collaborations

Partnership 101

Progress to Date

Summary

Glenn Research Center

Aeronautics

at Lewis Field



Resource Flows in Partnerships

- Pooling Arrangements- Two or more organizations combining similar resources
 - Cost and/or risk sharing
 - Gaining influence of stakeholders
 - Information sharing/benchmarking
 - Standard Setting
- Trading Arrangements: Two or more organizations exchanging dissimilar (but mutually valued) resources
 - Developing synergy through complementary competencies



Higher Level Inter-Agency Collaboration Needed

Very
Limited
Resources

Limited
Resources



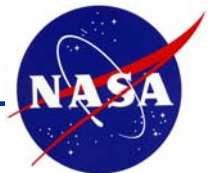
Collaborations leading to Reliance-
Critical Path Dependencies

Collaborations leading to
Risk Reduction and Intellectual Augmentation

Glenn Research Center

Aeronautics

at Lewis Field



What Defines a Good Partner

1. Resources- Do they possess the resources/capabilities we seek?
2. Incentives- Do they have adequate motivation and commitment to the success of the venture/partnership?
3. Cultural/Trust- Does it feel like their business approach fits well with ours?



Why Partnerships Fail

40-60% of all partnership/alliances fail

1. Environmental Reasons

- Failure to anticipate changing R&D demands
- Inability to reconcile macro-cultural issues

2. Strategic Reasons

- Purpose not clearly articulated

3. Structural Reasons

- Weak Incentive structure; ill suited for strategic purpose

4. Behavioral Reasons

- Egos and personal dislike (person versus organization)



Current Inter-Agency Collaborative Activities

- **NASA-DOD-DOE Alliance in Propulsion & Power**

- Completed five “Collaboration Workshops” during the past year
- Generated detailed roadmaps for collaborative activities in 9 technology areas



- **NASA-Air Force Propulsion Collaboration**

- Goldin/Peters agreement to increase collaboration



- **NASA GRC-Sandia Labs Collaboration**

- MOU signed for broad suite of Aero/Space technologies



- **NASA-FAA Alliance under NASA-FAA Umbrella MOUs**

- Aviation Weather Safety MOA signed
- Aviation Air Emissions MOA being prepared
- Accident Mitigation MOA being prepared



- **NASA-Canadian Agencies (CNRC, TC, MSC) Icing Alliance**

- Aircraft Icing Research Alliance (AIRA) signed to do joint icing research per single strategic plan

Glenn Research Center

Aeronautics

at Lewis Field



Partnership Status



Five Technology Areas Jointly Examined by NASA, FAA and NOAA for Collaboration

- Aviation Weather Information in the Cockpit Technologies
- Weather Products
- Automet Technologies
- Forward Looking Weather Sensors
- Turbulence Controls and Mitigation Systems

Glenn Research Center

Aeronautics

at Lewis Field



NASA-FAA Partnership

Memorandum of Agreement between NASA and FAA concerning Weather Accident Prevention R&D Activities was signed in June 2000. The MOA states NASA and FAA will jointly develop the following products:

1. Aviation Weather Information Technologies for NAS and users
2. Aviation Weather Products
3. Electronic Pilot Reporting/Automet Technologies
4. Forward-Looking Weather Hazard Sensors
5. Turbulence Controls and Mitigation Systems

This MOA was signed by FAA Associate Administrator of Research and Acquisitions, Air Traffic Services and Regulation and Certification as well as NASA Associate Administrator for Aero-Space Technology

Glenn Research Center

Aeronautics

at Lewis Field



NASA-NOAA/NWS Partnership

Memorandum of Agreement between NASA and NOAA/NWS concerning Weather Accident Prevention R&D Activities has been drafted and is under review. The MOA states NASA and FAA will jointly develop the following products:

1. Aviation Weather Information Technologies for NAS and users
2. Aviation Weather Products
3. Electronic Pilot Reporting/Automet Technologies
4. Forward-Looking Weather Hazard Sensors



Proposed FAA-NASA-NOAA Teams

Automet Team

AWIN Systems Team

Wx Comm Working
Group

Forward-Looking
Turbulence Detection
Team

Turbulence Controls
Alliance

Turbulence Product
Development Team

Glenn Research Center

Aeronautics

at Lewis Field



Summary

- NASA, FAA, NOAA fully endorse the partnership vision and direction.
- Current NASA, FAA and NOAA collaboration activities going well.
- Interagency implementation agreements in progress toward integrating collaboration activities into agency program plans.

